Quantum

DXi-Series Configuration and Best Practices Guide Generating and Deploying TLS Certificates

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Certificate Generation Using a Certification Authority (CA)

Step 1: Generate Private Key

Generate a private key to be used for creating the Certificate Signing Request (CSR): \$ openss1 genrsa -out key.pem 2048

Step 2: Generate Certificate Signing Request (CSR)

Generate a CSR using the private key. Ensure that the Common Name (CN) in the CSR matches the hostname of your server:

\$ openssl req -new -key key.pem -out csr.pem -subj

"/C=IN/ST=KA/L=bangalore/O=quantum/CN=server-1/emailAddress=test@quantum.com"

Note:

- The CSR includes the public key and information such as the server's hostname, organization, and country.
- Verify that the CN field corresponds to the hostname of the server.

Step 3: Submit CSR to the Certificate Authority (CA)

Provide the generated csr.pem file to your Certificate Authority for signing. The CA will issue a signed certificate (e.g., cert.pem) and may also provide intermediate certificates.

Full Certificate Chain Requirement:

- The ROOT CA need to be combined with all intermediate certificates provided by the CA into a full certificate chain.
- Example of a chained CA certificate file (cacert.pem):

```
-----BEGIN CERTIFICATE-----
ROOT CA cert
-----END CERTIFICATE-----
SUB CA cert
-----END CERTIFICATE-----
```

Note: The order of certificates in the chain can sometimes affect the validation process. Ensure the Root CA is at the top, followed by intermediate CAs in hierarchical order.

Step 4: Validate the Signed Certificate

Once you receive the signed certificate (cert.pem), verify it against the full CA certificate chain: \$ openssl verify -CAfile cacert.pem cert.pem cert.pem: OK

() Note: If validation fails, check that the full certificate chain is correct and in the appropriate order.

Step 5: Deploy the Certificates

Upload the following files to the server in TLS Certificates section:

- 1. Certificate File (Signed Certificate cert.pem)
- 2. Private Key File (key.pem)
- 3. Certificate Authority File (Full Certificate Chain cacert.pem)

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Certifica	ate Authority File	Customer li	nstalled: 20	24-11-27 4.	07:09 PM	Brow	se	
Certifica	ate Revocation List	Not Installe	d	24-11-27 43	07.03 F M	Brow	se	
nmunity orum		Constant	-					
Restore	e Factory Defaul	ts						
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Additional Notes

Order of Certificates in cacert.pem:

- The order can matter in some implementations. Ensure the Root CA is first, followed by intermediate CAs in order of hierarchy.
- If validation fails, try reordering the certificates in cacert.pem and test again.

Common Errors:

· Validation may fail if the full chain is incomplete

Contacting Quantum Support

Below is information related to contacting Quantum Support as well as steps to improve your Quantum customer journey.

- Submit a Ticket (Service Request) below
- Use MyQuantum Service Delivery Platform on the next page
- Use Cloud Based Analytics (CBA) on page 6
- Escalate a Case on page 6
- <u>Contact Quantum Sales on page 6</u>

Submit a Ticket (Service Request)

If you need to submit a ticket or speak to Quantum technical support, go to the Support page at https://www.quantum.com/en/service-support/

weicor	ne to Quantum
Global	Support Services
For more than 40	years, Quantum has been serving the needs of customers in over 125 countries
From Fortune 100	companies to emerging businesses, customers trust Quantum to provide highly
providing the high	packed by a wond-class service and support organization committed to hest level of customer support.

To start the process with Quantum Technical Support, click **Submit a Ticket**. From here, sign in to the MyQuantum Service Delivery Platform or create an account. For more information, refer to the <u>Use</u> MyQuantum Service Delivery Platform below section below.

	Quantum	
	Sign in with your email address	
	Email Address	
	Password	and the second
	Forgot your password?	
	Sign in	
	Don't have an account? Sign up now	
	Sign in with your external account	
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Use MyQuantum Service Delivery Platform

MyQuantum is a single portal for everything Quantum. You can view assets, open support cases, receive real-time updates, and search the Knowledge Base and documentation, all through a secure, online portal.

- 1. Create an account and log in to the MyQuantum Service Delivery Platform.
- 2. Register a product on MyQuantum.

Wy. Quantum	QUANTUM.COM SOLUTIONS SITE FAQ	Search Knowledge Articles
Home	ରୁ My Support Select support action below	Belect device action below
My Devices	Search our Knowledge Base Product Documentation Create Case	Register my device Download software Manage Licenses
🗱 My Tools 👻	Pivots / Atempo Support	

 Request site access to the Cloud-Based Analytics (CBA) monitoring portal and follow the instructions to set up product(s) to connect to CBA. You can use CBA to monitor Quantum products remotely, from a single dashboard, and Quantum Support can use it to help troubleshoot products more efficiently.

Refer to product documentation for product-specific information related to CBA.

Use Cloud Based Analytics (CBA)

Quantum products are equipped with a Cloud Based Analytics (CBA) agent that can provide log files and snapshots to Quantum CBA servers that are running in the cloud.

CBA enables Quantum systems to collect data regarding system and environment performance. The collected data is bundled and uploaded to the remote CBA server for analysis. You can access Quantum system performance and health results on the CBA dashboard (at <u>https://insight.quantum.com</u>) or through the MyQuantum Service Delivery Platform.

The CBA dashboard displays the analytic results of the uploaded CBA data using flexible charting tools, along with an overall health score of each Quantum system configured for the CBA account.

Escalate a Case

To escalate a case, follow the process documented here: <u>https://www.quantum.com/en/service-support/resources/escalation/</u>

Contact Quantum Sales

https://www.quantum.com/en/company/contact-us/